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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/443,793	11/18/1999	DAVID E. ALBRECHT	505-02	7726

2746 7590 04/10/2007
 WILLIAM H. EILBERG
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EXAMINER

PICKARD, ALISON K

ART UNIT	PAPER NUMBER
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3673

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/443,793

Applicant(s)

ALBRECHT, DAVID E.

Examiner

Alison K. Pickard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 28, 30-32, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barbarin (3,704,021) in view of Breaker.

Barbarin discloses an apparatus comprising a planar one-piece plate 14 with an opening. A one-piece seal 12 is disposed in the opening. A support ring 11 is disposed within the annular seal. The support ring is thinner than the other elements to allow fluid to act on the seal 12 when clamped. However, the support ring does not appear to have an orifice providing the fluid connection. Breaker teaches an apparatus comprising a plate, seal, and support ring (see Figs. 28 and 29). Breaker teaches equivalent means to provide fluid communication to the seal, either an orifice²⁰⁸⁷ or making the ring thinner. Thus, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide an orifice in the support ring of Barbarin to allow fluid communication to the seal as such is an equivalent means as taught by Breaker.

Regarding claims 31 and 35, Barbarin does not appear to disclose the chamfers 20 are at an angle of about 45 degrees. It is not considered inventive to discover the workable or optimum ranges by routine experimentation absent the showing of criticality for such ranges. See In re

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Aller, 105 USPQ 233, 235 (CCPA 1955). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to make the angles about 45 degrees.

3. Claims 28-30 and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (5,765,835) in view of Aichroth (3,167,322) in view of Jones (2,278,721).

Johnson discloses an apparatus providing a seal between two port faces comprising a planar, one-piece plate 33 having plural bolt holes 25 and an opening. A seal (o-ring) 41 is disposed within the boundary of the opening. A support ring 29 is disposed within the seal. The plate 33 has a pair of parallel surfaces. The opening allows a flow path perpendicular to the plate (see Fig. 1) and adjacent to the support ring. The support ring is chamfered (at 31) on an outer portion. Johnson does not disclose the seal is annular (i.e. circular). Aichroth teaches an apparatus providing a seal between port faces comprising a plate, seal, and support ring. Aichroth teaches that the apparatus can be circular or rectangular. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to make the seal (and therefore, the apparatus) annular as such are considered art equivalent shapes as taught by Aichroth.

Johnson does not disclose that the support ring has an orifice providing a fluid connection between the opening and seal. Jones teaches a seal between two port faces (of items 4 and 1, seen best in Figures 2 and 3). The seal comprises a support ring 38 disposed within a seal 46. Jones teaches using an orifice 39 to provide a fluid connection between the opening (i.e. inner circumference of the ring 38) and the seal 46 to ensure a fluid tight seal. The orifice allows fluid pressure to press the seal upward, outward, and downward into fluid sealing abutment with the surfaces of the joint (see page 2, line 73 through page 3, line 10). (Note: the seal of Jones is

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oriented between two surfaces similar to those of Johnson. The orifices of Jones are arranged generally parallel to these surfaces and would be arranged parallel to the surfaces of Johnson. Also, the end of the orifice would be immediately adjacent and in connection with the path because the support ring is.) Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the support ring of Johnson with the orifices taught by Jones so that fluid pressure within the opening is communicated to the seal to force it into fluid tight sealing engagement and prevent leakage through the joint.

4. Claims 28-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aichroth in view of Jones.

Aichroth discloses an apparatus providing a seal between port faces comprising a planar, one-piece plate 26 having an opening. A seal (o-ring) 22 is disposed within the boundary of the opening. A support ring 24 is disposed within the seal. The plate 26 has a pair of parallel surfaces. The opening allows a flow path perpendicular to the plate. The support ring is chamfered (at 32) on an outer portion. Aichroth does not disclose that the support ring has an orifice providing a fluid connection between the opening and seal. Jones teaches a seal between two port faces (of items 4 and 1, seen best in Figures 2 and 3). The seal comprises a support ring 38 disposed within a seal 46. Jones teaches using an orifice 39 to provide a fluid connection between the opening (i.e. inner circumference of the ring 38) and the seal 46 to ensure a fluid tight seal. The orifice allows fluid pressure to press the seal upward, outward, and downward into fluid sealing abutment with the surfaces of the joint (see page 2, line 73 through page 3, line 10). (Note: the seal of Jones is oriented between two surfaces similar to those of Aichroth. The orifices of Jones are arranged generally parallel to these surfaces and would be arranged parallel

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to the surfaces of Aicroth. Also, the end of the orifice would be immediately adjacent and in connection with the path because the support ring is.) Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the support ring of Aicroth with the orifices taught by Jones so that fluid pressure within the opening is communicated to the seal to force it into fluid tight sealing engagement and prevent leakage through the joint.

Regarding claims 31 and 35, Aichroth discloses two chamfers 32 at an angle with the axis of the support ring. However, Aichroth does not disclose that the angle is about 45 degrees. It is not considered inventive to discover the workable or optimum ranges by routine experimentation. See *In re Aller*, 105 USPQ 233, 235 (CCPA 1955). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to make the chamfer at an angle of 45 degrees.

5. Claims 28-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aichroth in view of Breaker.

Aichroth discloses an apparatus providing a seal between port faces comprising a planar, one-piece plate 26 having an opening. A seal (o-ring) 22 is disposed within the boundary of the opening. A support ring 24 is disposed within the seal. The plate 26 has a pair of parallel surfaces. The opening allows a flow path perpendicular to the plate. The support ring is chamfered (at 32) on an outer portion. Aichroth does not disclose an orifice in the support ring. Breaker teaches an apparatus between port faces comprising a plate, seal, and support ring. Breaker teaches using an orifice in the support ring to provide fluid communication between the opening and the annular seal. Therefore, it would have been obvious for one of ordinary skill in

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the art at the time the invention was made to use the orifice to provide fluid communication as taught by Breaker.

Regarding claims 31 and 35, Aichroth discloses two chamfers 32 at an angle with the axis of the support ring. However, Aichroth does not disclose that the angle is about 45 degrees. It is not considered inventive to discover the workable or optimum ranges by routine experimentation. See *In re Aller*, 105 USPQ 233, 235 (CCPA 1955). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to make the chamfer at an angle of 45 degrees.

Response to Arguments

6. Applicant's arguments filed 1-10-07 have been fully considered but they are not persuasive.

The arguments relating to Rode are unpersuasive. Rode clearly teaches modifying a "plate" to accommodate boltholes to accurately secure the device. Regardless, the bolthole limitations are not present in the current claims. The argument that Aichroth does not disclose a "plate" is unpersuasive. The limitation "plate" can be interpreted broadly. There are no other limitations that would prevent that element from being interpreted as a plate. The previous arguments relating to the rejections that have been maintained still apply. It is known to use an orifice to provide fluid communication to a seal member.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alison K. Pickard whose telephone number is 571-272-7062.

The examiner can normally be reached on M-F (10-7:30), with alternate Friday's off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tricia Engle can be reached on 571-272-6660. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Alison K. Pickard
Primary Examiner
Art Unit 3673

AP